BASIS FOR THE AMENDMENT

Claims 2-10 have been canceled.

Claim 1 has been amended as supported by Claims 2, 3, and by paragraphs [0017-0020 and 0022-0026] of the specification

New Claims 11-24 have been added as supported by the claims and specification as originally filed.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 1, 11-24 will now be active in this application.

REMARKS

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

The rejection of Claims 1, 4, and 7 under 35 U.S.C. § 112, 2nd paragraph, is obviated by the amendment of Claim 1 and moot in view of the cancellation of Claims 4 and 7.

The prior art rejections of Claims 2-10 are moot in view of the cancellation of these claims.

The present invention as set forth in **amended Claim 1** relates to a method for recovering molybdenum, comprising:

1) dispersing a molybdenum-containing material which comprises at least

molybdenum,

element A which is selected from the group consisting of

phosphorus, arsenic and mixtures thereof, and

element X which is at least one element selected from the group consisting of potassium, rubidium, cesium and thallium,

in water and adding alkali, to adjust a pH of a resultant mixed liquid to 8 or more;

2) adding a compound comprising magnesium and aqueous ammonia, after adjusting the pH of the resultant mixed liquid to fall within the range of from 6 to 12, if the pH of the resultant mixed liquid is not within the range of from 6 to 12, to form a precipitate comprising at least magnesium and element A;

3) separating said precipitate from a solution comprising at least molybdenum to obtain said precipitate and a recovered molybdenum-containing liquid; and

4) forming a precipitate comprising at least molybdenum by adjusting a pH of said recovered molybdenum-containing liquid to 3 or less, and separating the precipitate thus formed from the solution, to obtain a recovered molybdenum-containing precipitate,

wherein said molybdenum-containing material, which comprises at least molybdenum, element A and element X, is suitable as a catalyst for the production of methacrylic acid through gas-phase catalytic oxidation of methacrolein; and

wherein said molybdenum-containing material has a composition represented by the following formula (2):

$$A_aMo_bY'_cCu_fV_gX_dO_e \qquad (2)$$

wherein,

Mo, Cu, V and O represent molybdenum, copper, vanadium and oxygen, respectively;

A represents phosphorus and/or arsenic;

Y' represents at least one element selected from the group consisting of iron, cobalt, nickel, zinc, magnesium, calcium, strontium, barium, titanium, chromium, tungsten, manganese, silver, boron, silicon, aluminum, gallium, germanium, tin, lead, antimony, bismuth, niobium, tantalum, zirconium, indium, sulfur, selenium, tellurium, lanthanum and cerium;

X represents at least one element selected from the group consisting of potassium, rubidium, cesium and thallium; and

subscripts a, b, c', f, g, d and e represent an atomic ratio of each element, respectively;

when b is 12, a is in the range of from 0.1 to 3, c' is in the range of from 0 to 2.98, f is in the range of from 0.101 to 2.99, q is in the range of from 0.01 to 2.99, d is in the range of from 0.01 to 3 and e represents the atomic ratio of oxygen necessary for fulfilling the requirement of the valence of each element above, and (c' + f + g) is in the range of from 0.02 to 3.

New Claim 11 provides a method for producing a catalyst suitable for producing methacrylic acid through gas-phase catalytic oxidation of methacrolein, said method comprising:

1) providing a molybdenum recovered by the method according to claim 1 as a molybdenum raw material, andoptionally, dissolving or dispersing said molybdenum raw material in water to give a solution or slurry,

2) adding other raw materials containing Cu, V, A element, element Y' and element X to the solution or slurry, and then adding an amount of ammonia to give a raw catalyst solution or slurry,

3) drying the raw catalyst solution or slurry, and calcining to give a catalyst powder,

4) molding the catalyst powder, and optionally, calcining;

wherein said catalyst has a composition represented by the following formula (2):

$$A_aMo_bY'_cCu_fV_gX_dO_e \qquad (2)$$

wherein,

Mo, Cu, V and O represent molybdenum, copper, vanadium and oxygen, respectively;

A represents phosphorus and/or arsenic;

Y' represents at least one element selected from the group consisting of iron, cobalt, nickel, zinc, magnesium, calcium, strontium, barium, titanium, chromium, tungsten, manganese, silver, boron, silicon, aluminum, gallium, germanium, tin, lead, antimony, bismuth, niobium, tantalum, zirconium, indium, sulfur, selenium, tellurium, lanthanum and cerium;

X represents at least one element selected from the group consisting of potassium, rubidium, cesium and thallium; and

subscripts a, b, c', f, g, d and e represent an atomic ratio of each element, respectively;

when b is 12, a is in the range of from 0.1 to 3, c' is in the range of from 0 to 2.98, f is in the range of from 0.01 to 2.99, g is in the range of from 0.01 to 2.99, d is in the range of from 0.01 to 3 and e represents the atomic ratio of oxygen necessary for fulfilling the requirement of the valence of each element above, and (c' + f + g) is in the range of from 0.02 to 3.

The rejections of the claims over Laferty et al, Kuroda et al and Kamogawa et al are respectfully traversed.

In Claim 1, the pH in step 1 is needed to dissolve molybdenum-containing material and the pH in the step 2 is a pH to form and precipitate a magnesium salt of element A.

Further, the molybdenum-containing material of the present invention contains Cu and V as seen formula (2) in Claims 1 and 11.

On the other hand, the raw liquid of Laferty does not include Cu and V and maybe it includes uranium ion. As a result, the raw material of the present invention differs from the raw material of Laferty. Therefore, Laferty fails to disclose or suggest the present invention, even if Laferty was combined with Kuroda et al and Kamogawa et al.

Further, the recovered molybdenum of Kuroda includes phosphate (element A) as a heteropoly-acid salt of molybdenum and phosphor, while in the present invention the recovered molybdenum is essentially free from elements A including phosphor.

The invention of Kamogawa discloses to reactivate spent catalyst using ammonia. That is, ammonia is not used as a precipitating agent in combination with a magnesium compound (see step 2)) but ammonia is used as a re-activating agent for spent catalyst.

Thus, Kuroda et al and Kamogawa et al do not cure the defects of Laferty et al.

Therefore, the rejections of the claims over Laferty et al, Kuroda et al, Kamogawa et al are believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of these rejections is respectfully requested.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

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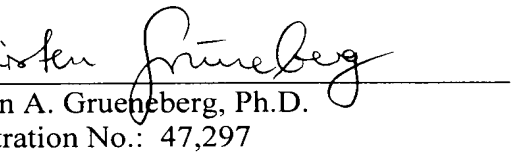

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